

Questions & Answers

RFQ #40727

1. This RFQ appears to be for a single mobile unit. What is the potential quantity over the next several years? **Unknown. However this variant will be the 10th that the Army has manufactured over the past 3 years. Additionally, certain states have indicated an interest in grants and subsidies for clean energy work of this kind provided that the power and energy recipients are for military, 1st responders to natural disasters or acts of terrorism.**
2. Must the DC voltage be 24? A much lighter weight, higher efficiency and more reliable solution can be obtained with 120 or 240 VDC. **No, the DC voltage need not be 24. In the past, the DC voltage has also been 48 VDC. Certain of the power applications / military missions such as recharging batteries lend itself well to these voltages.**
3. In the SOW NiMH batteries are mentioned, but in section 9.0 it specifically lays out a lead Acid battery type, including size and Ah. Is battery type and voltage up to the vendor as long as the total 1200 Ah capacity is achieved? **Yes.**
4. There is no mention of the targeted hydrogen storage capacity of the metal hydride cylinders. Do you have a value in pounds of H₂ you are looking for? **As this is a prototype, we will learn much more about the true H₂ requirements of the system for using it in the field for missions such as air quality monitoring, land fill management, homeland security lighting and communications retransmission. However, weight and volume must still meet trailer gross vehicle weight limit.**
5. Do you have a preference over an ICE vs. a FC as the generator? One will be twice the efficiency of the other and impact the quantity of hydrogen consumed over time. **No preference.**
6. It would be quite easy to include 208 3-phase output power in addition to other requirements. Are you interested in additional options? **Yes - as long as all of the other requirements are included.**

7. What is the surge/spike rating that is required for your application of the output power? This is important to know for proper sizing of the inverter and determining whether a transformer or transformerless design makes sense. Certain field applications (see question 4 above) are expected not to exceed 10kW. However, it is hoped that the battery bank will help to mitigate power spike issues as well.
8. In the "DC Enclosures" section, a 20A unregulated DC power outlet is mentioned. What will this be used for? It is important to know, so we can configure the proper VDC limits. Historically, this has been used for DC to DC missions such as battery charging.
9. Is it your desire to have the capacity to generate hydrogen using 5kW of electricity continuously? No. We realize that renewable energy has its limits and therefore, continuous generation is not realistic.
10. Do you want the fuel cell or hydrogen ICE to be capable of providing 5kW of electricity continuously? No. As a prototype, we are more concerned about the integration of the "balance of plant" over continuous generation of electricity. It is hoped that future applications will better leverage emerging technologies to provide continuous, reliable power.
11. How long (hours) do you want the fuel cell or ICE to be able to provide 5kW of electricity? (how much storage capacity) The current battery bank can provide approximately 30 kwh of stored energy. We'd like to ensure that this remains the key goal in terms of continuous electric supply.
12. Are there any limits or goals for the size, weight and cost of hydrogen storage medium? (low pressure vs high pressure vs hydride) No. As a prototype system, balance of plant integration (and understanding) is paramount. Future applications will be more "exacting" in the H2 storage goals.
13. What ambient temperature range (excursion) must this unit operate? This completed unit will be utilized at the National Training Center, Fort Irwin, California.
14. Are there any requirements for an amount of distilled or De-Ionized water to be provided per day or that can/must be stored in the unit? No. However, that is a concern for the fuel cell variant.

15. How automatic does the MACS unit need to be? For example, does the operator select if he wants the hydrogen generation system on or off or the fuel cell/ICE genset on or off or should the whole system automatically make a determination how to run the various input and output devices based on user loads and energy resource available? Previous variants of the MACS were engineered to automatically keep the battery bank state-of-charge at a preset level. However, manual overrides were also in place for emergency operation conditions.
16. Does the written solicitation/quote in written form have to follow any guidelines; a specific template, a format that is required? The format is left up to you as long as it includes all information sections requested in the SOW and RFQ.
17. When is the submission due? The submission date, as stated in the RFQ, is 30 November 2004 before 4 PM EST.
18. Do we mail it or e-mail directly to you? The submission, as stated in the RFQ, should be emailed to me and a hard copy should be mail within 3 business days.
19. And, finally what is the e-mail address of the new posted public solicitation where I can see if there is any new information available; such as specific sizing requirements, photos of previous MACS projects, etc.? The SOW and RFQ are posted at <http://www.govworks.gov/vendor/csolicit.asp> and the email address to send all submissions is Alan.Rumney@mms.gov. Any emails should be less than 3 MB in size due to pipeline limitations.
20. Do you want us to quote on our company handling the complete acquisition of equipment and the integrating and installation of the hybrid system into your supplied trailer, and then having our company deliver it to West Point, and then instruct the instruction personnel how to use the complete MACS system (Would that take several days or longer?) The SOW states that all components are to be delivered to West Point on or before 11 March 2005 where the Cadets will be assembling the final product. The intent of the program office is to have the winning vendor have some supervisory assistance in this process to make sure everything is integrated correctly and installed into the required trailer, but this is subject to change.